IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

CHARLES JONES, ,

Plaintiff,

vs. Case No. 1:20-cv-36

CORIZON HEALTH, INC., et al,

Defendants.
_____/

TRIAL
(Excerpt: Testimony of Stephen Cohle, M.D.)

HELD BEFORE THE HONORABLE HALA JARBOU, U.S. DISTRICT JUDGE

Lansing, Michigan, Tuesday, November 15, 2022

APPEARANCES:

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E X C E R P T

THE CLERK: All rise for the jury.

(Jury entered courtroom at 1:26 p.m.)

THE COURT: Thank you, everyone. Please be seated. All right. Ms. Damico, the next witness, please.

MS. DAMICO: The plaintiff calls Doctor Stephen Cohle to the stand.

THE COURT: Thank you. If you'll go around. The other side. Pull that door towards you.

DOCTOR COHLE: Okay.

THE COURT: Pull it towards you and step up. Watch your step and stay standing and raise your right hand, please.

STEPHEN COHLE, M.D.,

having been sworn by the Clerk at 1:27 p.m. testified as follows:

THE COURT: Thank you, sir. Have a seat. If you could state your name and spell your last name for the record.

THE WITNESS: Stephen with a P-h, Cohle C-o-h-l-e.

DIRECT EXAMINATION

BY MS. DAMICO:

Q. Good afternoon, Doctor Cohle. How are you?

A. I'm good. How are you?

Q. Could you please tell the jury who you are and what you do?

A. Well, I am the chief medical examiner for Kent County. In

that role I oversee death investigations in Kent County, those that are reported by law to the medical examiner. I'm also a forensic pathologist, which means I have training in how to do autopsies on sudden and unexpected deaths and violent deaths.

Q. I want to go over your background a little bit. You are a medical doctor, true?

A. That's right.

Q. Where did you go to medical school?

A. University of Missouri at Columbia.

Q. What year did you graduate?

A. 1977.

Q. After you went to medical school, did you do a residency anywhere?

A. Yes, I did.

Q. Where was that?

A. That was a residency in pathology at Baylor College of Medicine in Houston.

Q. When you finished your residency -- what was your residency in?

A. Pathology.

Q. Thank you. When you finished your residency, did you take any type of examination?

A. Yes, I did. I took an examination in anatomic and clinical pathology, which was under the auspices of the American Society of Clinical Pathology, the American Board of

Pathology, actually, and passed those two exams.

Q. Can you explain to the jury simply what it means to be board certified in a specialty?

A. Yes. In a specialty of medicine, to be board certified there are a couple of things that you have to do. Number one, you have to complete a certain amount of training, depends on the specialty, but you have to complete training in that specialty under the supervision of experienced physicians that are practicing in that same specialty, so after the training then you take an examination in which there are questions related to, in this case, the practice of pathology, and you have to pass that exam, and after that you're board certified.

Q. And you became board certified in what year?

A. 1981.

Q. After that did you work anywhere as a pathologist?

A. Well, after that I took a fellowship in forensic pathology at the Institute of Forensic Sciences in Dallas, Texas. That was a one year training, and subsequently I passed the examination, the specialty exam in forensic pathology, and following that I was hired to work in Grand Rapids where I still am.

Q. Where were you first hired in Grand Rapids? At the county?

A. No. For a hospital called at that time Blodgett Memorial Medical Center.

Q. And where are you currently employed?

A. Well, my immediate employer is a group of pathologists called Michigan Pathology Specialists and we provide pathology expertise to the Spectrum system of hospitals which is in Grand Rapids and across the state, but we do pathology for them.

Q. Can you explain to the jury the difference between forensic pathology as opposed to just pathology in a hospital?

A. Yes. Forensic pathology is more focused on looking at deaths -- for one thing, deaths. Hospital pathologists primarily spend their efforts in diagnostic pathology, making a diagnosis from a biopsy or a smear on a slide or from general laboratory testing of blood and other body fluids.

We specifically hone in on autopsy and on people who have died of violence, whether it's accident, suicide, or homicide; people who die really of just about any -- in any situation; if it's a sudden, unexpected death, these are heart attacks and things like that. The law does require us to at least investigate, if not autopsy, deaths in police custody, and deaths related to abortion.

Q. What is your current position with Kent County?

A. Well, my position with Kent County is I'm the chief medical examiner.

Q. How long have you held that position?

A. About 20 years.

Q. Okay. And as the chief medical examiner for Kent County, are you elected? Are you appointed? Are you hired? How does -- how do you become that?

A. Appointed by the commissioners, the county commissioners.

Q. Okay. Have you been retained by any of the parties as an expert witness in this case?

A. No.

Q. And how are you here? Are you here --

A. Well, my involvement in this case is that this individual was an inmate in the Kent County jail and had collapsed there and died shortly thereafter, so under the state law that death had to be reported to our office.

When a death is reported, then we as the medical examiner -- there are two of us in Grand Rapids -- we have the decision to make, are we going to do an autopsy or do we have enough other information available that makes an autopsy unnecessary? In a case like this, this is a fairly young person, he was not expected to die in the near future, and so under those conditions I decided to do an autopsy.

MS. DAMICO: Your Honor, I'd like at this time to proffer Doctor Stephen Cohle as an expert witness in this case.

THE COURT: In what area?

MS. DAMICO: Of forensic pathology.

THE COURT: Any objection?

MR. CHAPMAN: No objection, Your Honor.

THE COURT: All right.

MS. DAMICO: Thank you.

THE COURT: Thank you.

BY MS. DAMICO:

Q. Doctor Cohle, can you explain to the jury the difference between a cause of death and a manner of death?

A. The cause of death is the injury or illness or combination of the two that sets in motion the events that leads to death, so it's what starts everything downhill.

The manner of death is something that medical examiners have to rule on in addition to the cause of death, and that is basically the way the death came about. We have five options, and those include accident, natural, suicide, homicide, and indeterminable.

Q. Thank you. Did you bring anything here with you today?

A. Yes. I brought my report and just the file that I have on this case.

Q. Where do you do your autopsy for the county?

A. Well, the autopsies are still done in the morgue at the Blodgett campus of Spectrum Health in Grand Rapids.

Q. Do you have access to Spectrum medical records when you do autopsies if the patient was in Spectrum?

A. I can go online and get them through the electronic medical records.

Q. So tell me, do you have a process that you follow or procedure you follow when you do autopsies?

A. Yes.

Q. Tell me -- tell the jury what that is.

A. Yeah. There are several steps we take when doing an autopsy. The first is -- and it really is similar to a doctor who treats living patients, the steps they go through, it's the same thing. The first thing is to get history of what happened, the events that led to death as much as they're known, and in some cases it's quite important for us to know what is the scene of death, is it a home or a roadway or something like that. And whatever information may be relevant from the scene and the history, we would like to get, we'd like to know.

The second thing is to perform an examination of the body. We do so first externally, then internally, and as we do the internal examination we take samples for laboratory testing, mostly toxicology, but we might do other kinds of testing if indicated by the type of case that we're looking into.

We also take samples of the tissues to look at microscopically, and when all the laboratory testing is done and we've had a chance to look at the tissue slides, we put everything together in the form of a report which includes our opinion, in this case my opinion, as to the cause of death and

the manner of death.

Q. All right. Can you tell me where do you get the history from?

A. Well, we have investigators, and these are individuals with varying backgrounds, but their job is to obtain information from whoever reports the death to them, so it's usually law enforcement or hospital personnel because that's where people who die suddenly -- either they're dead at the scene or they're brought to the hospital and then die, so that's -- whoever is in charge of the body contacts our office and an investigator takes the case, they gather as much information as they can as to how the death occurred and what were the circumstances, and so that is one source -- the main source, I would say, of gathering information before we do an autopsy.

We also have access to medical records or we can get access to medical records if that is needed in our judgment.

Q. In the case of Wade Jones, how did you obtain -- or did you obtain a history?

A. I did.

Q. And where did you obtain the history from?

A. Well, again, most of the history was from our death investigator who was the one who was contacted by the hospital when this gentleman died.

I also did access medical records just to see if

there were any -- if there was anything else relevant that I might need to know.

Q. What was his history?

A. Well, again, referring to my report, and when I generate a report I include the history as well as my other observations of the body, so the basic history -- I will summarize this a little bit. This was a 40-year old man who was an inmate at the Kent County jail. After he had been in the jail about 63 hours he was found unresponsive. He was last seen alive 10 minutes before being found.

They took him to the hospital. They did a scan of his head, a CT scan. There was no injury, because obviously that's one of the possibilities when somebody is found unconscious.

They also scanned the abdomen and they didn't really see any injury there or any major illness that would explain this collapse.

They checked his heart and found that it was functioning well.

They did a toxicology screen and did find a few drugs of the kind that would be expected to be used to treat someone who is -- is an alcoholic and possibly in withdrawal from alcohol use.

He was declared to be brain dead, and he did undergo removal of the heart after death and -- let's see.

I will say, continuing on with the history, this gentleman was alone in his cell and jail staff noted that he was shaking and seemed to be having hallucinations. They thought this might represent alcohol withdrawal. Basically when found he was sitting on a toilet leaning against a wall, and they started CPR, and I think that's pretty much the major points of the history.

Q. Okay. When someone dies in jail, do you have -- or when someone dies, do you have a protocol with respect to what you ask for as far as toxicology?

A. Well, generally, no. As long as we have an adequate sample, blood is the preferred medium that we use for doing a drug screen. As long as we have an adequate specimen we do a complete drug screen which identifies over 500 drugs and toxins. The reason we don't just check for drugs that maybe the person had access to is because very frequently they have access to a lot more drugs than anybody knew or that was reported to us, so we want to be comprehensive in our screening.

Q. Is the timing of the blood that you request important?

A. Well, yes. We prefer to get a sample of blood -- if somebody makes it to the hospital and survives for a period of time, we want to get a sample of blood that was drawn as close as possible to admission -- to the person's admission to the hospital, because otherwise if they're in the hospital for a

few days their body will gradually metabolize and eliminate drugs that were in them at the time of admission.

Q. All right. So after you get the history, what's the next thing you do?

A. The next thing is to examine the body, which includes determining how they're identified. Most of the time it's simply by a tag, and we note if they came in with any clothing or if they're wearing clothing, jewelry, we inventory that. Then we examine the body externally, height, weight, eye color, hair color, and so on.

Q. Okay. As far as his body, the external examination, you found that there was -- what is generalized jaundice?

A. Jaundice is a yellow discoloration of the body. It's seen in people who are in liver failure.

Q. Do you have an opinion as to whether that was -- he had that before he came in -- before he died or is that something that he could have developed when he was in the hospital? Do you have an opinion either way?

A. Well, I can't say for sure --

Q. Okay.

A. -- about the timing of it.

Q. Do you know how long he was in the hospital before he came to you for autopsy?

A. Let's see here. So he was in jail when he collapsed on the 27th of April and he died about a week later on the fourth

of May.

Q. Okay. With respect to his corneas, what did you note?

A. Okay. The corneas were clear.

Q. Okay. Do you have an opinion as to what clear corneas mean during an examination -- during your autopsy, the external examination?

A. Not very much. They're supposed to be clear. Occasionally if there's been some damage to the cornea it may be cloudy, but the other thing I look for is to see if the patient was wearing contact lenses.

Q. All right. In your experience as a medical examiner -- a pathologist for how many years? I can't --

A. 40.

Q. 40, have you seen patients that are in alcohol -- are alcoholics?

A. I have.

Q. Have you seen patients -- I call them patients, people that are in all stages of alcoholism?

A. Yes.

Q. And beginning stages, middle stages, end stages?

A. Yes.

Q. Can you explain to the jury what cirrhosis is?

A. Cirrhosis is severe scarring of the liver. It can occur from a number of causes, mainly alcohol abuse and viral hepatitis, but it's considered pretty much end stage liver

disease, that the person is -- has a 5-year life expectancy, and I haven't reviewed this, but it's probably something like 10 or 15 percent, so that is associated usually with a nodular appearance of the liver caused by both scarring and then the remaining liver cells try to regenerate and they make these small nodules which to the naked eye -- that along with the scarring, is what cirrhosis is.

Q. When you do examinations, autopsies of people with end stage liver disease, what are some of the other findings in their organs that you see with end stage liver disease or end stage alcoholism?

A. Well, besides the liver disease -- of course, it depends on what causes it. If you want me to put -- more or less restrict my comments to alcoholism or alcohol liver disease, yes, there can be changes or damage to the brain. Alcohol is a toxin so it can damage the brain. It can damage the heart. Of course it damages the liver. It can damage the pancreas.

Now, we don't see all these changes in every case. Sometimes -- and we get a fair number of cases in my practice of people who have a long history of alcohol abuse and they're just found dead. They live alone. Nobody was observing them. There was no medical observation or anything of their final moments and they're dead, and they usually have liver disease ranging from the first stage, which is a fatty liver, it's yellow, to cirrhosis, and that's all we have, and so I've had

the opportunity to see a whole range of findings in people who were long-term alcoholics.

Q. Okay. When you've seen people, the whole range of alcoholics, are there any external findings -- external examination findings that you associate with long-term alcohol abuse?

A. I would say jaundice is one. Sometimes they get dilated small blood vessels, particularly on the face. They're called spider angiomas, and they can -- can be evidence of long-term alcohol abuse.

Again, if they have not been well nourished, if they haven't had a good diet, then -- this is not specific for alcoholism, but they can be very thin and have a lot of muscle wasting.

Q. Okay. Distended abdomen, is that a sign?

A. It can be if they have cirrhosis particularly and if they have a -- accompanied by cirrhosis -- in people that have it there may be fluid accumulation in the abdomen. It's called ascites, a-s-c-i-t-e-s, and the abdomen can be distended with that and there can actually be a fluid waive if you tap on the abdomen.

Q. Did you note that on your findings with Mr. Jones' abdomen?

A. I did not. He didn't have cirrhosis.

Q. Okay. And with respect to limbs, you found them, what?

Sorry, his limbs to be, what?

A. Okay. Let's see here. They were symmetric, so there was no missing limbs, no missing digits, anything like that, and they looked basically normal. The musculature appeared normal.

Q. Is a sign of end stage liver disease swollen limbs, ankle, feet, fluid collection?

A. Yes. There may be -- because of the severe liver damage there may be alterations to the blood chemicals and that can cause swelling and fluid in the -- particularly in the ankles because of gravity.

Q. And you didn't find any of that on your examination?

A. No.

Q. And just to back up, the spider angioma -- I don't know if I said that right?

A. Angiomas.

Q. Did you find any of that in your examination of Mr. Jones?

A. No.

Q. So after you do the external, what's the next thing you do?

A. The body is opened and we examine the organs internally.

Q. Okay. So I think you weigh them?

A. Yeah. That's part of the internal examination.

Q. Okay. So let's just talk about weighing. I want to talk a little bit about the organs that you weigh.

So, the brain, let's talk about the brain. You found for Mr. Jones, how many grams was it?

A. 1,680 (sic).

Q. Now, I know not everybody's brain weighs the same but there's ranges, correct?

A. Yes.

Q. And a male -- for a male, is that within a normal range?

A. Yes.

Q. Okay. His heart, there's no entry because it was harvested?

A. That's right.

Q. With respect to his lungs, what are the grams you have there?

A. Well, the right lung weighed 430 grams and the left lung weighed 490 grams.

Q. So tell me how those fall within ranges.

A. Well, the lungs in various autopsies have a tremendous range of weight. It depends on if the person died relatively slowly, and particularly they weren't in a hospital setting, then the lungs can accumulate with fluid as the breathing gradually slows down and the heart slows down so they can be quite heavy relative to this. They can be eight or 900 grams or more.

Similarly, somebody that dies of a drug overdose, they tend to have very heavy lungs. Someone that dies in

heart failure tends to have heavy lungs because the heart slows down. People that die more suddenly have -- tend to have lighter lungs because they didn't have time for fluid to accumulate in them.

Q. So would those grams you found, 430, 490 fall into a normal range?

A. In general. Doesn't tell me much.

Q. His liver is, what?

A. 2,480.

Q. Where does that fall?

A. That's quite heavy.

Q. And we'll get into that in a minute. The spleen, what did you find with that?

A. The spleen was 140 grams, which is normal.

Q. Okay. And then the kidneys, right and left?

A. Each weighed 250 grams, also pretty much normal --

Q. Okay.

A. -- weight.

Q. Then it appears you did a head examination. Tell me what you do with that.

A. Well, that really means examining the internal aspect of the head including the brain and looking at the brain for injury or disease, and that was done.

Q. So tell me what you found, and you're going to have to do some explaining to me and to the jury.

A. Well, he did not have any shrinkage or atrophy of the brain. He -- the -- certain areas that I examined that may be abnormal in an alcoholic, those were normal. I can explain those in more detail if needed, but those areas were -- to the naked eye were normal.

The main abnormality he had was dead tissue in a part of the nervous system called the cerebellum which is situated below the two cerebral hemispheres. It's in the back of the skull, and this was abnormal, at least portions of that were because his brain had swollen to the extent that parts of the cerebellum were squeezed into a small opening and lost their blood supply and died.

Q. Okay. You got to back that up. So, let's talk about it. So, the cerebellum -- I want to read this a little bit. First of all, you said part -- shrinkage. Tell me about shrinkage.

A. Well, shrinkage or atrophy of the brain can occur for many causes. We see it in individuals who have Alzheimer's disease because they lose brain substance. You can lose it from -- well, some brains, frankly, don't develop properly. If a child is born and during delivery had problems with oxygen delivery to the brain, they'll end up with a small brain and it probably will never reach an adult size, normal brain.

People that have a toxin such as alcohol, over the years that can damage the brain to the extent that brain tissue is lost and the brain is smaller.

Q. What part of the brain would you expect to be shrunk or where would you expect to find this if it was caused by alcoholism?

A. Well, there's no marker specifically for alcoholism. There are two cerebral hemispheres, and they consist basically of gray matter and white matter. Gray matter is the cells that really cause the brain to be functional. White matter is conducting tissue, but you can lose both of those, and so the two cerebral hemispheres can shrink down, and there are spaces within the brain called ventricles, and this is where spinal fluid is made and circulates, and these ventricles can enlarge if there's loss of brain tissue, just enlarge to accommodate the loss of brain.

There's also a part of the brain called the mammillary bodies. The mammillary bodies can shrink, although that's not a hundred percent specific for alcoholism. It's basically due to thiamine deficiency, lost of the vitamin -- or not enough thiamine, but a lot of alcoholics don't have that in their diet and so they are probably more prone than other individuals to get thiamine deficiency and thus shrinkage of the mammillary bodies.

The cerebellum, which I talked about before, its main job is for balance and coordination, and there is a part of the cerebellum -- in the middle part of it there's two little hemispheres, and right between them, that can get atrophic or

small due to alcohol abuse, and that's why some long-term alcoholics kind of sway when they walk and they're not coordinated because they've got cerebellar damage.

Q. Did you find any of that kind of damage on autopsy?

A. No.

Q. Okay. Did you find any evidence of alcohol related shrinkage or damage when you did the autopsy on his brain?

A. No.

Q. Okay. Let's talk about this sentence. There is extensive necrosis particularly of the cerebral tonsils. What does that mean?

A. That would be cerebellar tonsils.

Q. Sorry.

A. And that's what I referenced earlier, though, because the cerebellar tonsils, they're projections of the cerebellum on the underside of it, the inferior edge, and when there's severe brain swelling, they're forced down through an opening on the floor of the skull, and they get squashed and the blood supply to them is cut off and, therefore, the cerebellar tonsillar tissue is -- becomes dead from lack of blood supply.

Q. What caused the swelling, do you know?

A. Well, he had an event when he was in the jail and he was found unresponsive and CPR had to be performed and basically he went too long without oxygen to his brain. He was brain dead.

Q. Based upon your skill, training, and experience, the damage that you saw to his cerebellar tonsils, is that the kind of damage that someone could be walking around with 63 hours before and have that kind of damage?

A. No. That takes many hours for the dead tissue in the cerebellum to become apparent, so if you can see it with the naked eye, they had a major event hours or even days before.

Q. My question is could someone function, be up walking, talking, going to work, driving cars if they had that kind of damage in their brain before they went to jail?

A. Oh, I see. No. Well, no. That -- you wouldn't be functioning -- once you have -- you're to that point, if you get to that point, unfortunately, where the tonsils of the cerebellum are dead, your brain is dead because it's so swollen. It's not only the cerebellum that's not getting enough blood, it's the whole brain.

Q. So that's not something that was caused over just years and years of alcohol abuse?

A. No.

Q. That's an event due to lack of oxygen?

A. That's right.

Q. Okay. Is there anything else on the brain -- your examination of the brain that you found abnormal?

A. No, there wasn't.

Q. Okay. And you found that the thalamus, hypothalamus, and

basil ganglia are free of natural disease. Can you explain what the functions are of the thalamus, hypothalamus, and basal ganglia as in simple terms as possible, if you can?

A. Well, those are parts of the brain that have to do -- the basal ganglia have to do with movement and coordinated movement, as well as the cerebellum. The thalamus and hypothalamus involve basic vegetative functions such as eating and sleeping and, let's see, I think that was what we were talking about. Yeah, I think that was what you were asking about.

Q. And if someone was -- had long-term alcoholism, would you expect those areas of the brain to show some damage?

A. Not necessarily.

Q. Okay. Cavities. Tell me what your purpose is of that part of your report.

A. The cavities are the spaces where the organs are located so I have that as part of my autopsy report. We look for fluid, and this includes the pleural cavities where the lungs are and the abdominal cavity or the peritoneal cavity where the liver, spleen, and intestines are.

I look for things like fluid accumulation or blood. I look to see that the organs are normally situated. Are they where they're supposed to be. And then finally in that section I measure the fat in the abdominal wall, which is just a rough estimate of nutrition or even obesity. Obviously the

fatter the person, the more fat they're going to have in their abdominal wall.

Q. And you found one and a quarter inches in his abdomen?

A. And that's about normal.

Q. Okay. The neck was unremarkable?

A. Correct.

Q. Okay. And tell me about the cardiovascular system. There was no heart so what did you look at?

A. I looked at the aorta and looked to see if there were any degenerative changes, and he did have mild atherosclerosis, which we probably all have. It was certainly not remarkable.

Q. Okay. And the respiratory system, please tell the jury what you looked at.

A. Well, that's the lungs and the trachea. We basically take out the larynx, which is the voice box area, the trachea, and the lungs looking for tumor, looking for infection such as pneumonia, looking for malformations, looking for obstruction in the airway, and I didn't really find anything -- oh, also I look for emphysema specifically. He didn't have emphysema, and I looked for blood clots in the lung also known as pulmonary emboli, and he didn't have any of that.

Q. You did write the lungs are -- and I can't say this word -- say it.

A. Yes. The word is atelectatic, and that means collapsed. It just means -- when somebody is on a ventilator and then

they withdraw support, they stop the ventilator and the lung tissue just collapses. That's a normal occurrence when that happens.

Q. So is it your testimony -- what is your testimony with respect to his respiratory system? Was it normal?

A. It was normal.

Q. Okay. Thank you. Let's talk about the liver. Tell us what you found about the liver. Before you talked about its size.

A. I did, and we look for size, consistence, and color when we're examining organs, and in this case the liver was yellow which would indicate consistency -- well, what that means is there was fat. Under the microscope we see fat globules within the liver cell. Probably the most common cause of that is alcoholism but you can also see it in obese people and you can also see it in diabetics.

Q. And we're still on the gross examination. We'll get to the microscopic. What did you find with his spleen?

A. The spleen was normal.

Q. Okay. Lymph nodes?

A. Lymph nodes were normal.

Q. Okay. The geno -- genitourinary system?

A. Yes. So the kidneys and the bladder, and in men the testicles, and, let's see here, and the prostrate gland --

Q. Okay.

A. -- in men. And I did not see any abnormalities in any of the genitourinary organs.

Q. And the gastrointestinal system?

A. We start with the stomach -- with the esophagus, rather, and go all the way down to the large intestines to and including the rectum, and I did see within the stomach he had inflammation called gastritis.

And, let's see here, there were -- other than that, that's -- that's more of a diffuse red color of the stomach. I didn't see anything else like ulcers or tumors or anything like that, any major diseases.

And then the rest of the intestinal tract was really unremarkable and had no disease.

Q. Gastritis, what does that mean?

A. Gastritis means inflammation of the stomach, and it occurs oftentimes due to stress, and it's not uncommon in someone in this situation who's been in the hospital basically brain dead for a week, or even if they haven't been brain dead for a week, they've been hospitalized and ill or injured, gastritis is a very common finding.

Q. And the endocrine system, explain for us what that is.

A. That is basically the glandular system. The parts of it that I tend to look at are the pituitary gland, the thyroid gland, the pancreas, and the an adrenal glands, and he did have in the -- he did have in the pancreas an inflammatory

condition called acute pancreatitis, and that all appeared to be acute. There was nothing chronic or no underlying disease of the pancreas, and the an adrenal glands were unremarkable as were the thyroid gland and the pituitary gland.

Q. And musculoskeletal system was the last thing you looked at.

A. That's the bones and muscle, primarily. And that was normal. No injury and no disease that was apparent.

Q. Okay. And then you do a microscopic description, so tell the jury what that entails.

A. Well, as I do the autopsy I take small pieces of the tissues that I'm examining to look at under the microscope, and usually it's brain, heart, lungs, liver, kidneys at the least, and -- or -- and anything else that appears abnormal. Most of the time if a tissue looks normal to the naked eye, it is normal, but the more important organs, such as the heart and brain, I will tend to look at any way under the microscope because there are occasions when something is not normal under the microscope.

At any rate -- so I did that. Of course, I didn't look at the heart in this case because it had been harvested, but the other organs I did examine.

Q. So I want to look at the lungs. And you did a microscopic -- you took microscopic sections of the lungs, true?

A. I did.

Q. Okay. And tell us what you found.

A. I found localized pneumonia.

Q. Okay. And do you have an opinion how -- what -- how that occurred?

A. Well, he was in the hospital the last week that he was alive, so to speak, and he was on a ventilator so it's very common for -- because a person who's unconscious has difficulty clearing their airway the way we would, and so it's not uncommon when somebody has been on a ventilator to see at least some degree of pneumonia.

Q. Did you see any other sign of any type of disease or that the structures of his lungs were falling apart?

A. No. They appeared to be otherwise healthy lungs. For example, there was no emphysema, which would be pretty much the most common lung disease that I see.

Q. You wrote there no smoker granules within alveolar macrophages. What does that mean?

A. Well, smokers when they inhale the cigarette smoke there's particulate matter that gets engulfed by white blood cells called macrophage, and in the lung they have a pretty typical appearance, so one way to tell whether a person might have been a smoker is if you look at their lungs under the microscope you can see these white blood cells with the smoker granules in them. He had none.

Q. He had none. So if the evidence will show that Mr. Jones used to be a smoker but hadn't smoked in five years, this finding would be consistent?

A. It would be.

Q. Okay. And as far as his liver goes, you took sections of his liver?

A. Yes.

Q. And tell me what you found.

A. Well, I mentioned that when I saw the liver with the naked eye it was yellow, and I confirmed that under the microscope that there was fat. He also had a more advanced liver pathology called alcoholic hepatitis, and this is an inflammatory condition. It's a little more serious than just having a fatty liver. It's not -- hasn't evolved all the way to end stage liver disease, so that's what he had. I guess I would say from my standpoint it did confirm that he was an alcoholic.

Q. Okay. Look at your findings in a little more detail. It says there's abundant alcoholic hepatitis with extensive alcoholic hyaline. If you can just explain that a little to the jury?

A. Yes. This is a -- hyaline, h-y-a-l-i-n-e, is an accumulation of damaged cells -- damaged organelles or small constituents of the cell and it conglomerates. It forms a mass with inside the cell, and it's bright red. It's pretty

characteristic, but it is an indicator of damage to the cells.

Q. Do you have an opinion as to whether the alcoholic hepatitis with extensive alcoholic hyaline is a reversible condition?

A. I think it is because it hasn't scarred yet. If you can reverse it before the scarring sets in, which would be cirrhosis, then it would be reversible.

Q. And it's reversible by, what?

A. Well, stopping drinking.

Q. And the next thing it says there are sinusoidal neutrophils. What is that?

A. Well, the liver under the microscope has projections of sort of columns of cells, I guess I would say, that are connected, but between two adjacent columns there's a space called a sinusoid and blood percolates through there, and it allows the liver to have access to toxins in the blood so that -- and drugs and anything like that. That's what the liver does is it breaks down and helps excrete chemicals or even cell products that need to be excreted because the cells have died, so it's a scavenging type organ, and the sinusoid is where the blood percolates through and where the liver can scavenge unwanted chemicals and debris.

Q. Is that related to the hepatitis?

A. Probably. I didn't answer the question fully --

Q. Okay. I thought --

A. -- because you asked about --

THE COURT: Hold on. Don't talk over each other, please. Go ahead. Start again.

THE WITNESS: Yes. The question was about what were the neutrophils doing in the sinusoids and that's basically part of the alcoholic hepatitis. Part of what can happen, some of the cells in alcoholic hepatitis will die. Now, the liver can replace itself, it's very active at that, so just because cells -- some cells are dying -- in fact, all of us have cells that are dying periodically and they have to be replaced. The neutrophils are a type of white blood cells that scavenge up dead cells, and so basically that's what's -- that's what their presence means in the sinusoids.

Q. And your next finding there is cholestasis?

A. Yes. That refers to bile. The liver cells make bile and the bile ultimately ends up in the gallbladder and from there it drains into the small intestine to help digest fatty foods, and if a liver cell is damaged, bile may accumulate within spaces between the liver cells.

Q. And what's your last finding with respect to his liver, your last microscopic finding?

A. Oh, ballooning degeneration, which is basically severely damaged liver cells, some of which will end up dying.

Q. Do you have an opinion as to whether it's more likely than not that the findings -- your findings regarding his liver

were a cause of his death?

A. Sure. I think they contributed to death via the alcohol abuse.

Q. With respect to your findings on his brain, do you believe that those had any -- well, strike that. It's more likely than not that the findings on his brain were caused by the lack of the oxygen after he had the cardiac arrest, true?

A. Yes.

Q. Okay. And it's your opinion that if he had stopped drinking, the conditions you found in his liver were reversible?

A. I think more likely than not, yes.

Q. And it's your opinion, more likely than not, he was not in end stage liver -- alcoholic -- end stage alcohol disease?

A. That's correct, I don't think he was.

Q. Okay. Let's talk about the kidneys, the genitourine -- I can't say it.

A. Genitourinary.

Q. Thank you, system. Let's talk about his kidneys.

A. Well, this is under the microscope, I think you're asking.

Q. Yes.

A. He had some changes that were due to treatment, and he was given -- although I can't quote it right now without looking at the chart, but he was basically given medication to help get rid of excess fluid, and when one has an excess amount of

this fluid, basically salts of drugs, that can damage the kidney cells. We see this a lot, for example, in people who are dying -- or who have died of a diabetes complication called ketoacidosis where they have a high amount of this -- these chemicals in their blood. They get filtered through the kidneys and damage the lining cells of the kidneys. This is a similar phenomena. Basically in this case, instead of his own body producing high levels of these chemicals, he was given them to try to treat excess fluid accumulation from the -- his alcoholism.

Q. Doctor, you testified a little bit earlier that you did review his records from Spectrum Health while he was in the hospital?

A. Yes.

Q. Do you recall reviewing a record from the Renal Associates of West Michigan, the kidney specialists?

A. Well, not specifically. I did the autopsy four years ago so I don't remember chapter and verse.

Q. We've admitted a record -- we've admitted the record already as Exhibit 1. I would like to show you a record to refresh your memory.

A. Okay.

MS. DAMICO: May I?

THE COURT: Approach?

MS. DAMICO: May I play the record?

THE COURT: You want to play something?

MS. DAMICO: I want to show him the record. It's been admitted.

THE COURT: Okay. Go ahead.

MS. DAMICO: Thank you.

BY MS. DAMICO:

Q. Doctor, I'm going to show you a medical record from a Paul A Delyria, MD, from Renal Associates of West Michigan. I want you to read his one paragraph or two paragraphs in the middle there.

A. Yes, I see that.

Q. And regarding his kidney injury, can you read that first sentence?

A. His kidney injury is acute tubular necrosis due to cardiac arrest with significant downtime before return of circulation.

MS. DAMICO: You can turn it off. Thank you.

BY MS. DAMICO:

Q. Is that consistent with what you found when you did the microscopic findings of his kidneys?

A. Yes, it is.

Q. Okay. So in your opinion it's more likely than not that your findings -- microscopic findings on autopsy regarding his kidney were caused due to the downtime during his cardiac arrest?

A. Yes.

Q. They weren't caused by alcoholism, it was due to a lack of oxygen?

A. No.

Q. True?

A. True.

Q. Thank you. With respect to his endocrine system, let's talk about the pancreas.

A. Yes.

Q. So he's got -- what's your first finding with respect to the pancreas?

A. Well, there were areas of fat necrosis, meaning dead fat tissue which the pancreas has in and around it.

Q. What's necrosis -- necrosis means dead, right?

A. Dead.

Q. Do you have an opinion as to how -- if that was also -- or how that occurred?

A. Well, the pancreas makes enzymes that help digest food, and basically it has a duct that drains into the small intestine. When the pancreas is damaged these enzymes, one of which is called lipase, which digests fat, that's released and it does digest the fat. That is right around and within the kidney, so that's a manifestation -- finding that fat necrosis or dead fat is a manifestation is pancreatitis.

Another thing that we see, depending on how long the pancreatitis has been active, is we see white blood cells,

specifically neutrophils, that react to that dead tissue, and so one can get a relative idea of how long the pancreatitis or inflammation of the pancreas has been going on by how much neutrophil infiltration there is of the dead tissue.

Q. With respect to Mr. Jones, there was no chronic pancreatitis, true?

A. That's true.

Q. Did you find acute pancreatitis?

A. Yes.

Q. Tell me what that -- what's the significance of finding acute pancreatitis as opposed to chronic?

A. Well, acute means in general that a disease has been active for hours to days whereas chronic implies weeks to months in a general sense, so what this tells me is that probably during his hospitalization he developed pancreatitis, probably occurring at least in part because of lack of oxygen, and that was manifested by the fat necrosis and by a sparse -- a rather small amount of neutrophils that were reacting to the dead tissue.

Q. Is it your opinion that it's more likely than not the kidney disease -- the kidney issue with the lack of oxygen when he had cardiac arrest that caused the tubular necrosis to his kidney also damaged his pancreas at the same time?

A. I think that's quite reasonable, yes.

Q. Do you have an opinion as to whether this acute

pancreatitis is something that was caused by alcoholism?

A. It often is. In this case I think it's less likely because the symptoms of acute pancreatitis tend to be severe abdominal pain, so I would -- I did not have a history that this man was complaining of abdominal pain, and the other thing is that he lived about a week in the hospital and the inflammation that I see in and around the pancreas is more like a few days in length, but those are two reasons I think it's less likely that it was directly related to his alcoholism.

Q. And when you say severe abdominal pain as relating to acute pancreatitis, I mean it's doubling over severe pain?

A. Yes. That's classically what it's described as.

Q. And then, lastly, you talk about the central nervous system. What are you looking at?

A. Well, looking at representative sections from the brain, and I looked at two areas of the brain. The brain to the naked eye -- to my naked eye examination was normal. What I was looking for mainly under the microscope was to see if there was associated damage to the brain from lack of oxygen. We had a medical history that was quite consistent with that, and I just wanted to see did the brain sections that I looked at confirm it, and they did. There was extensive dead brain cells in the sections I examined.

Q. We've already talked about that when we talked about the

gross.

A. Yes.

Q. Okay. Very good. The last page of your report, five of five, it has some toxicology findings?

A. Yes.

Q. Okay. And these you send out to a lab, it looks like?

A. Well, we have a lab at Spectrum. It's -- it was -- it was at that time and still is Spectrum -- it's not under my control, but -- so, yeah, we do toxicology there.

Q. And down at the -- almost to the middle of the page, the bottom it says, ordered -- do you see where it says that?

A. Order comments.

Q. No. It says blood -- blood specimen?

A. Ordered by, yes.

Q. Can you tell me when this blood was ordered?

A. Well, it was probably on the day of the autopsy. The standard thing that we do is when someone has been hospitalized for a period of time is request blood that was drawn at the time of the patient's admission or at least as close to admission as possible, and so it says the blood was collected on the 27th, which I think is the day, as I recall, that he had his collapse.

Q. Does it have a time that it was collected on your report?

A. Well, it says -- yes. 8:45 in the morning.

Q. Okay. Does your report list results of the toxicology?

A. Yes.

Q. What are the results?

A. Well, we asked for quantitation of relevant drugs which was -- one of which was Valium. I'll just use the common name. So Valium and one of its metabolites, they were both really not detectable, which doesn't mean they weren't present but it would mean they're at an extremely low level, and then the other one was another drug that he was supposed to be on which is an antipsychotic drug, which is kind of a tranquilizer drug, and that was also reported as below the level of detection.

Q. Do these have any -- does this have any significance to you?

A. Well, it sounds like he -- I would infer that he wasn't given adequate amounts of these drugs, or at least presumably wasn't if he was supposed to be on them, and when he came into the hospital the levels are virtually nondetectable.

Q. Okay. Did you form any final diagnoses based upon your examination, based upon your autopsy?

A. I did.

Q. Can you tell the jury what they were?

A. The primary diagnosis was that he had medical complications of chronic alcohol abuse.

Q. Okay. And so tell the jury what that means.

A. Well, that's a general term. When this man had his

collapse he wasn't being monitored in a hospital setting and so the specific terminal event is not provable by the autopsy. He may have had a seizure. He may have had -- his heart may have had an abnormal rhythm. As I mentioned earlier, alcohol damages the heart. He may have had some liver toxicity, and in that case the liver, which detoxifies the body, may not have been -- if it were damaged -- reversibly damaged may not have detoxified the body adequately so that chemicals at a higher -- rose to a high level and caused him to have a cardiac arrest, but those were among the possibilities. I just can't specify exactly which one of those is, although I have some experience with other cases and have an idea of what might have been the mechanism, but I usually don't specify unless, again, the patient is in the hospital with a monitored situation and we can say exactly what happened.

Q. What is delirium tremens?

A. Delirium tremens is a term for alcohol withdrawal in which someone is a chronic alcoholic, usually with daily alcohol intake and then they quit drinking, and the condition is manifested by delirium, which means they're not in their right mind, they're not fully conscious and awake. They often have hallucinations. One classic symptom is that they think -- as part of their hallucinations they think there's bugs off the wall, so I have had individuals who were watched or had some observations of them before they died that stated it looks

like he was picking bugs off the wall but there were no bugs on the wall, so it's basically a hyperactivity of the brain. Alcohol is a depressant so if you drink regularly and drink a fair amount you're going to depress your brain, and it has to kind of increase its level of alertness to combat the alcohol. You withdraw the alcohol, the brain is super -- gets active and that is manifested by hallucinations, seizures, and delirium.

Q. Is delirium tremens something you would write as a cause of death in an autopsy?

A. I think it's more of a symptom of alcohol withdrawal and I would -- it would be one of the medical complications.

Q. Okay. So you have some medical complications. You have history of alcohol abuse, true?

A. Yes.

Q. Alcoholic hepatitis?

A. Yes.

Q. The acute pancreatitis, we've gone through that.

A. I think that's more terminal phenomenon.

Q. So you have it in your report as a diagnosis. So is that a mistake on your report?

A. No. He had acute pancreatitis. I tend to -- but acute pancreatitis can be associated with alcohol abuse. I guess I would say, as I consider it, it had much more minor role. I don't think it was responsible, for example, for his losing

consciousness on the day he was admitted to the hospital. I don't think it was likely there at that time, so it's more or less related but more indirectly.

Q. And just to be clear, it's your opinion it's more likely than not it was caused by the lack of oxygen after his cardiac arrest?

A. His seizure -- or his collapse, I guess I would say.

Q. And then the history of shaking and hallucinations prior to being found unresponsive in jail, what is that?

A. Well, that's the history I was given, and that sounds to me very much like alcohol withdrawal for the reasons I just explained.

Q. Same -- in your -- more likely than not delirium tremens?

A. Yes.

Q. Okay. And then number two, status postmortem harvest of heart, that's a diagnosis, not a cause of death. I understand that.

A. It's just something -- I felt it was important to mention on the front page of my report in case anyone is asking, well, what about the heart? Didn't he have a heart attack? Well, I don't know, but they do check the heart out pretty carefully before they harvest it so I would say the odds are very low that that happened.

Q. And that's another question. I mean, if his heart was harvested and donated, do you have an opinion as to whether he

had any underlying heart disease that was the primary cause of his cardiac arrest?

A. I think it's extremely unlikely.

Q. And you'll defer to the cardiac experts on that question?

A. Yes.

Q. Okay. And, lastly, you have hypoxic ischemic encephalopathy. Please.

A. Well, it's what we talked about in terms of the brain and when I looked at the brain sections under the microscope, that he had severe brain damage due to lack of oxygen which is related to the event that occurred on the 27th of April that led to his terminal hospitalization.

Q. So during opening the defense counsel was up here -- Mr. Chapman was up here saying that Mr. Jones' body -- all of his organs were basically in such a state of disrepair that it doesn't matter if they treated him or not in this jail, he was going to die anyway. Do you have an opinion as to whether it's more likely than not, if he had been treated properly with Valium, diazepam, and monitored, if he would have died?

A. I think more likely than not he would have survived.

MS. DAMICO: Thank you. I have nothing further.

THE COURT: All right. Who's got cross?

CROSS EXAMINATION

BY MR. CHAPMAN:

Q. God afternoon, Doctor.

A. Good afternoon.

Q. I just have a few questions for you. Before you did your autopsy and your investigation, did you know that he drank a fifth of vodka or a fifth of alcohol a day for nine years?

A. I don't think I knew exactly. I just knew he had a history -- or was told he had a history of alcohol abuse.

Q. That's a significant amount of alcohol?

A. I think so.

Q. You're not telling the jury that your examination supports the fact that he wasn't an alcoholic?

A. No.

Q. In fact, you had many findings that supported the fact that he was a long-term drinker that had damage to his body?

A. Particularly the liver, yes.

Q. Okay. Have you heard the term functional tolerance?

A. I think I would have to have you define it if you're asking the question. I've heard that people can drink a lot, can be alcoholics, and others that encounter them may not -- if they don't know the person, they may not realize they're drunk, but that's the closest I can come to that.

Q. Were you aware that just -- let's say about an hour and a half before he came into the jail he was in court. He ended up blowing a PBT .15. In fact, the judge commented, he was in court, nobody knew he was intoxicated, he didn't feel like intoxicated. Would you consider that to be functional

tolerant when you can walk around at 1.5, two, whatever and nobody would even know it?

A. I think it would fit what I just described. I don't usually use the term functional tolerance, but, yeah, the point I think is the same, that people can be alcoholics, drink quite a bit, be maybe legally intoxicated, but others, again, who don't know them or don't see -- you know, don't realize that they're an alcoholic may not know that because they do have tolerance to alcohol.

Q. Somebody that has a significant tolerance to alcohol and drinks that much a day, have you ever examined those or have you ever heard of those suddenly dying?

A. Well, yes. We get -- as I mentioned during direct examination, we get a number of individuals who had a history of alcohol abuse who are found dead so presumably they died in relatively -- relatively quickly.

Q. In all of those when you did your autopsy -- in any of those did you find -- surprised that when you did your autopsy there wasn't as much damage as you thought there would be?

A. Well, there can be a whole range of damage, actually, so I guess I'm not surprised. Sometimes I'm surprised that there's not more, but, you know, it can range from almost normal, the liver, because I think people vary in their genetic. Some people manifest a likelihood to be -- have organ damage by alcohol, they have this likelihood more than others, but -- so

I would say I'm aware that individuals with chronic alcohol abuse can be found dead. Now, most of the time they are found dead. Most of the time -- I haven't had very many -- I've had a few cases similar to this with a similar history, but -- so there were some observations of these people, but the ones that were found dead in their home, they often live alone, I don't know what their terminal activities were or if they had seizures or whatever, I can't prove it.

Q. But you have had cases or heard of cases, read of cases where people had significant long-term alcohol abuse and they died, suddenly died?

A. Well, I think I've explained that, yeah. I mean, the ones that I have had in my experience usually are found dead. I mean, it's an unexpected death, and so that's my most -- my greatest experiences with that situation.

Q. And at least some of those when you do the autopsy you don't find significant damage. In fact, you said you're surprised sometimes that there isn't a significant amount of damage?

A. I'd say most people have -- I'd say the baseline, most people have a yellow, fatty liver. That's kind of the first stage of alcoholic liver disease. Most of them have that. And it can go on up all the way to end stage liver disease, such as cirrhosis, and, of course, sometimes they have other -- which complicates things, they may have hypertension

or other diseases that might contribute to their death, but you can die just from long-term alcohol abuse.

Q. Again, Mr. Jones did have a fatty, yellow liver?

A. He did.

MR. CHAPMAN: Thank you very much. I have no further questions.

THE COURT: Anything else?

MS. DAMICO: I have nothing further.

THE COURT: All right. Thank you. Thank you, Doctor. You can step down. Watch your step, please. Is he excused?

MS. DAMICO: He is excused.

THE COURT: Defense, is he excused?

MR. CHAPMAN: Oh, yes. I'm sorry. No more questions.

THE COURT: Thank you, sir.

(Witness excused at 2:34 p.m.)

(End of excerpt)

I N D E X

* * *

EXHIBITS: ADMITTED

None

REPORTER'S CERTIFICATE

I, Genevieve A. Hamlin, Official Court Reporter for the United States District Court for the Western District of Michigan, appointed pursuant to the provisions of Title 28, United States Code, Section 753, do hereby certify that the foregoing is a full, true and correct transcript of the excerpt of the proceedings had in the within entitled and numbered cause on the date hereinbefore set forth; and I do further certify that the foregoing transcript has been prepared by me or under my direction.

/s/ Genevieve A. Hamlin

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